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25X1A

CENTRAL INTELLIGENCE AGENCY

REPORT NO.

INFORMATION REPORT

CD NO.

COUNTRY	USSR (Sverdlovsk Oblast)	DATE DISTR.	17 Oct. 1950
SUBJECT	Motorcycle Plant No. 38 in Irbit	NO. OF PAGES	7
PLACE ACQUIRED	25X1A	NO. OF ENCLS. (LISTED BELOW)	3
DATE OF INFO.		SUPPLEMENT TO REPORT NO.	

25X1X

A. Location and Traffic Facilities

1. In the eastern part of the town at the SVERDLOVSK - TURINSK railroad line. The plant had spur tracks (the plant layout 25X1X in Annex 2 25X1X the plant location 25X1X the glass factory by

B. Plant History

1. The plant was moved from "MOSCOW" to IRBIT (Sverdlovsk Oblast) 25X1X in January 1942 25X1X and set up in a former brewery

The machine installations were stored partly in cantonment 25X1X buildings of the plant area partly in scattered places in the town area. The construction of the workshops started during the war. Most of the buildings 25X1X were completed by October 1947 and production could be concentrated on the plant area.

Part of the installations were dismantled machines of the German BMW Plant (including the EISENACH - L 51/M 76 - 25X1X Plant) 25X1X and some came from KHARKOV

All single parts for motorcycles were manufactured in the plant itself except saddles, dynamos, storage batteries and 25X1X speedometers Single parts of engines were sent for assembling to a plant in town up to the Fall of 1947. The assembled engines were then returned to the 25X1X motorcycle plant. single 25X1 parts were also manufactured in the engine department of the 25X1 town plant. only mentioned an engine department of the plant. The engine department was moved from the branch 25X1X plant in town to the main plant in the Fall of 1947. 25X1X Sidecars were not built, only mounted, before October 1947. However, production of sidecars was said to 25X1X presumably be started in workshop No. 22 (see Annex 3).

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STATE	NAVY	NSRB	DISTRIBUTION
ARMY #	X AIR #	X FBI	

25X1

25X1X The motorcycles were supplied for the Soviet Army
25X1X

C. Plant Installations

(the following enumerations correspond to the numbers of the sketch - plant layout - in Annex 3). The plant installations were determined according to the indications made
25X1X

Departments recorded:

1. Foundry Department

25X1X It consisted of a steel, light metal and bronze foundry shop.

Installations:

a. The steel foundry shop had two walled furnaces, about
25X1X 20 feet high each with a volumetric capacity of
25X1X 20 tons Coke and oil firing. Cleaning ma-
25X1X chines, pattern-molding shop

b. Light metal foundry shop. Two round electric furnaces, about 6½ x 5 feet, one square-shaped electric furnace, 10 x 6½ feet. The three electric furnaces had an inside diameter of about 40 inches and a molten bath depth of about 24 inches. They were in constant operation
25X1X

c. Bronze foundry shop. An obsolete furnace. Tapping
25X1X was done by hand.

Production:

25X1X Engine blocks Two hundred and forty to two hundred and fifty engine blocks were cast each weekday. The blocks were cleaned and then stored. About
25X1X five thousand blocks were on stock in the dump
25X1X Gear wheels were made of steel cylinder heads,
25X1X casing pistons and brake drums of aluminum. Brake
25X1X shoes and bronze rods used for motorcycle
25X1X bushings were also manufactured

2. Forge

25X1X

a. Installations:

One large and two small steam hammers, an electric hammer, six annealing furnaces with oil firing, two electric furnaces, one upsetting machine and three punches. There was also an
25X1X acid bath

b. Production:

25X1X All types of axles, shafts, gear wheels , connecting
25X1X rods and other single parts for motorcycles
25X1X Wrenches for motorcycle tool sets were also produced

3. Hardening shop

25X1X [redacted] No details available.

4. Department producing motorcycle parts

25X1X [redacted]

a. Installations:

25X1X Lathes, drilling machines, planers, milling and grinding machines [redacted]

b. Production:

Work on single parts.

25X1X 5. Repairshop [redacted]

Used only for plant requirements.

25X1X 6. Engine test shop [redacted]

No details available.

25X1X 7. Engine assembly and gear construction [redacted]

It was a new building according to [redacted] The work- 25X1
25X1X shop was completed by the middle of 1947 [redacted]. The
engine department formerly located in the town moved into this
25X1X building [redacted]

a. Installations:

Unknown.

b. Production:

25X1X Assembly of engines [redacted] and finishing production of
25X1X gears [redacted] [redacted] engine parts 25X1
were also manufactured).

25X1X 8. Grinding shop [redacted]

No details available.

25X1X 9. Lathe shop [redacted]

a. Installations:

25X1X Mostly large machines, automatic machines for Cardan parts and hubs [redacted]

25X1X b. The production included Cardan parts and hubs [redacted]

25X1X 9a. Electric department [redacted]

25X1X Starters and dynamos were installed in this department [redacted]

25X1A

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25X1X 10. Screw department

Installations:

25X1X Twelve automatic screw cutting lathes

25X1X 11. Processing of frames, tubes and plates

a. Installations:

Twelve German and American punches for frame parts, 18 lathes, milling machines and planers, 5 grinding machines and one American Churchill punch for fenders.

b. Production:

Frame parts, fenders, tank screwings, wing nuts, air filters, etc., bending of exhaust pipes, manufacture of mufflers, baggage grids.

(1) Manufacture of fenders: 27x12-inch plates were cut from 80x32-inch plates (0.8 mm gauge) and submitted to rough-pressing in a large punch. In two additional punching operations, the roundings were punched as well as the holes for the frame-holding screws. The maximum output per shift was three hundred pieces.

(2) Manufacture of hubs: 12x12-inch steel plates (about 15 mm gauge) came from an outside plant and were put into the punch for rough-pressing. Punching of the spoke ring and turning of the hubs were done in two additional working operations.

(3) Manufacture of frames: The motorcycle frame had eight parts. The material in its original form was a steel pipe 22 mm in diameter with a wall thickness of 2 mm. The eight parts were assembled in a mold after each part had been adjusted by preliminary precision grinding. Twenty minutes per frame was needed at the mold. In three following working stages the frames were completely welded and then adjusted. The frame was again put in a mold for mounting the plates for the foot rests, the tank, and the screws. Later the steering (?) heads were milled. The completed frames came last to the lacquer shop in the same building. There was a fixed norm of 14 frames per man and shift. The actual output per shift was 25 completed frames (painting included) with eight men employed at the punches and five men in the frame construction shop.

In the same building, brake shoes were lined (asbestos), floating axles were turned and threaded, and screws,
25X1X wing nuts and other small parts were produced

25X1X 12. Assembly shop

Assembling was done on an assembly line about 100 feet long, along which 12 motorcycles could be arranged in tandem. The dried frames from the lacquer shop were placed on the assembly

line. Assembling of the wheels, fenders, tanks, steering columns, springs as well as the installation of the brakes, the lighting system and the searchlights was done successively. The completed engine and exhaust manifold were then installed. Test runs of the completed motorcycles were made outside the plant. Part of the motorcycles were provided with a sidecar, but fitting of sidecars was not done on the assembly line 25X1X

13. Administration

It was in the same building as the lacquer shop. 25X1X

14. Compressor station

No details available. 25X1X

15. Boiler House

Installations:

A large and a small steam boiler up to 20 atm.gauge (coal firing). A 150 to 160-foot smoke stack The boiler house heated the plant and supplied warm water. 25X1

25X1X

16. Water Tower 25X1X

17. Storage house for completed motorcycles 25X1X

18. Buildings of the former brewery 25X1X

Served as auxiliary workshops.

19. Coal dump 25X1X

20. Tool department 25X1X

21. Transformer station 25X1X

6,600/380 volt.

22. Sidecar workshop: The existence of this workshop is doubtful. mentioned on this site workshop construction, not yet in operation. 25X1X

Installations also mentioned:

Rolling mill (stated by only one source, not credible).
Storage depot. Storage of single parts for motorcycles (dynamos, tires, various metals, etc.) 25X1X
Raw materials (round iron, 16 feet long and 5 to 20 mm in diameter, brass bars, steel and aluminum bars 16x8x6 inches, plates 80x32x0.5 inches, copper bars 25x12x4 inches, copper tubes 13.5 mm in diameter, wires and plates) were stored in another warehouse 25X1X
Upholstery shop. Worn upholstery and seats of sidecars coming from outside were reconditioned 25X1X

Two sheds of the fire department with recently built water basin. A test strip for running motorcycles was said to be in the vicinity of the plant 25X1X

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C. Work Force and Working Time

The 1947 work force indications vary between four hundred and a thousand Soviet workmen and three to four hundred W's per shift. Many W's were employed as skilled laborers
25X1X (53 percent

D. Raw Materials and Power

25X1X 1. A plant-owned power station was allegedly scheduled.
25X1X Power was supplied from IRBIT
25X1X through a transformer station

2. Raw materials: Shipments of round iron and plates arrived
25X1X in irregular intervals A plant for truck trailers was on the western edge of the town and a plant for spark plugs was located in town. Both could supply needed
25X1X parts

E. Production

1. A two-cylinder motorcycle, M 72, with a piston displacement of 750 cubic centimeters, similar to the BMW model, was produced. Single and sidecar motorcycles were manufactured. However, sidecars were only mounted in the completed motor-
25X1X cycles during the time of observation
25X1X Motorcycles with piston displacements of
25X1X 500 cubic centimeters 350 cubic centi-
25X1X meters and 600 cubic centimeters
25X1X were also produced.

Motorcycles with Cardan shaft, following the BMW design, were manufactured after early 1947. The attempted reproduction of DKW motorcycles (200 cubic-centimeter, two-cycle engines)
25X1X was discontinued

A new motorcycle, M 75, with a 35 HP engine (750 cubic centimeter piston displacement) was manufactured after
25X1X August 1948 and press publications.

All motorcycles were lacquered olive-green (Army color)
25X1X

2. The indications on the monthly output are not always
25X1X reliable the quota for the
25X1X Spring of 1947 was four hundred motorcycles, but
25X1X the quota for the same period was 1,750 motorcycles).

25X1X (monthly output 750 motorcycles) are probably more accurate. This motor-
25X1X cycle output would also agree with the monthly output of engine blocks (a thousand units)

25X1 3 Annexes: 1.
2.) Motorcycle Plant No. 38 (?) in IRBIT
3.)

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Legend to Annex 3

1	Foundry
2	Forge
3	Hardening shop
4	Department for the construction of engine parts
5	Repairshop
6	Engine test shop
7	Assembly of engines and gear construction
8	Grinding shop
9	Latheshop
9a	Electric department
10	Screw department
11	Frame, pipe, and plate working
12	Assembly shop
13	Administration
14	Compressor station
15	Boiler house
16	Water tower
17	Storage depot for completed motorcycles
18	Buildings of the former brewery
19	Coal dump
20	Pool department
21	Transformer station
22	Sidecar workshop